PERMIT TO CONSTRUCT

COMPANY NAME
TESORO REFINING AND MARKETING CO
P.O. BOX 817,
WILMINGTON, CA 90748-0817

EQUIPMENT LOCATION
2101 E. PACIFIC COAST HIGHWAY
WILMINGTON, CA 90744
Facility ID#: 800436
Facility Type: NOx & SOx RECLAIM (Cycle 1), Title V
Note: A Title V application has been submitted, but the permit has not been issued.

EQUIPMENT DESCRIPTION

Additions are shown as underlined and deletions are shown as ~~strikeouts.~~
Section H: Permit to Construct and Temporary Permit to Operate

Equipment	ID No.	Connected To	RECLAIM Source Type / Monitoring Unit	Emissions and Requirements	Conditions
PROCESS 3: FLUID CATALYTIC CRACKING (FCCU)					P13.1
SYSTEM 1: FCCU RECOVERY SECTION					S13.4, S15.2, S15.12, S31.1,
ABSORBER, V-406, HEIGHT: 64 FT 4 IN; DIAMETER: 4 FT 6 IN A/N:~~472873~~ **535089**	D78				
TOWER, SPLITTER, HEAVY NAPHTHA, V-407, HEIGHT: 47 FT;DIAMETER: 5 FT 6 IN A/N:~~472873~~ , **535089**	D1267				
TOWER, RERUN, V-408, HEIGHT: 82 FT; DIAMETER: 7 FT A/N:~~472873~~ , **535089**	D1268				
TOWER, SPLITTER, LIGHT NAPHTHA, V-409, HEIGHT: 60 FT; DIAMETER: 8 FT 6 IN A/N:~~472873~~ **535089**	D1269				

~~COLUMN, DEPROPANIZER, V-410, HEIGHT: 80 FT DIAMETER: 6 FT~~ A/N:~~472873~~	~~D908~~				
COLUMN, DEPROPANIZER, V-410A, HEIGHT: 99 FT 6 INCH; DIAMETER: 6 FT A/N:~~472873~~ **535089**	**DXXXX**				
ACCUMULATOR, V-413, HEIGHT: 10 FT; DIAMETER: 5 FT A/N:~~472873~~ , **535089**	D79				
DRUM, V-414, RERUN REFLUX A/N:~~472873~~ , **535089**	D915				
ACCUMULATOR, V-415, SPLITTER TOWER REFLUX, HEIGHT: 19 FT; DIAMETER: 5 FT 7 IN A/N:~~472873~~ , **535089**	D80				
ACCUMULATOR, V-416, DEPROPANIZER TOWER REFLUX, LENGTH: 19 FT; DIAMETER: 6 FT 6 IN A/N:~~472873~~ , **535089**	D81				
DRUM, DRYING, LOW PRESSURE, V-419, HEIGHT: 20 FT; DIAMETER: 10 FT A/N:~~472873~~ , **535089**	D82				
VESSEL, SURGE, V-423, AVGAS CHARGE, HEIGHT: 19 FT; DIAMETER: 7 FT 7 IN A/N:~~472873~~ **535089**	D84				
DRUM, DRYING, V-424, RERUN TOWER GAS, HEIGHT: 10 FT; DIAMETER: 3 FT 6 IN A/N:~~376618~~, **535089**	D85				
KNOCK OUT POT, FLARE, V-431, LENGTH: 13 FT; DIAMETER: 6 FT A/N:~~472873~~ , **535089**	D1271				
DRUM, PRESSURE RELIEVING SEAL, V-432, HEIGHT: 43 FT; DIAMETER: 4 FT 4 IN A/N:~~472873~~ , **535089**	D86			HAP: (10) [40CFR 63 Subpart CC, #2, 5-25-2001]	
POT, DEETHANIZER WATER DRAIN, V-547, HEIGHT: 6 FT; DIAMETER: 1FT 6 IN	D1273				

A/N:~~472873~~ , **535089**					
DRUM, WATER DRAW-OFF, V-675, LENGTH: 4 FT 8 IN; DIAMETER: 4 FT A/N:~~472873~~ , **535089**	D1275				
KNOCK OUT POT, VAPOR RECOVERY, V-676, LENGTH: 4 FT 4 IN; DIAMETER: 2 FT A/N:~~472873~~ , **535089**	D1272				
KNOCK OUT POT, V-1100, NAPHTHA, LENGTH: 12 FT 6 IN; DIAMETER: 3 FT A/N:~~472873~~ , **535089**	D912				
COLUMN, DEBUTANIZER, V-1547, HEIGHT: 100 FT 6 IN; DIAMETER: 7FT A/N:~~472873~~ , **535089**	D1280				
COLUMN, DEETHANIZER, V-1548, HEIGHT: 12 FT 6 IN; DIAMETER: 6 FT A/N:~~472873~~ **535089**	D910				
ACCUMULATOR, V-1549, DEBUTANIZER REFLUX, HEIGHT: 20 FT; DIAMETER: 7 FT A/N:~~472873~~ , **535089**	D913				
KNOCK OUT POT, V-1789, PROPANE/PROPYLENE, HEIGHT: 8 FT 6 IN; DIAMETER: 24 FT A/N:~~472873~~ , **535089**	D909				
COMPRESSOR, RERUN TOWER GAS, C-43/44, 2 TOTAL, 4 CYLINDERS A/N:~~472873~~ , **535089**	D87				
COMPRESSOR, C-142, WET GAS A/N:~~47287~~ , **535089**	D918				H23. 4
VESSEL, SEPARATOR, HIGH PRESSUR, V-2343, LENGTH 22FT;DIAMTER:8FT A/N:~~472873~~, **535089**	D1597				

VESSEL, SEPARATOR, SOUR WATER FLASH, V2344, LENGTH25FT;DIAMETER:8FT6IN A/N:~~472873,~~ **535089**	D1598				
FUGITIVE EMISSIONS MISCELLANEOUS A/N:~~472873~~ , **535089**	D1365			HAP: (10) [40CFR 63 Subpart CC, #5A, 5-25-2001]	H23. 16

* (1) Denotes RECLAIM emission factor (2) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS,etc.)
(9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

COMPLIANCE RECORD REVIEW

A three year printout of the facility's compliance history is shown in Attachment 1. All NOVs issued to this facility are listed as either in compliance or are closed. There are no open NOVs currently.

BACKGROUND

Tesoro submitted the following application for the modification of the FCCU recovery section. Tesoro's Los Angeles Refinery FCCU was initially built in the 1940's. The current maximum throughput capacity is 36,000 bbls/day.

See Table 1 below regarding the previous modification and the permit history the FCCU recovery section.

Table 1 FCCU Recovery Permit History

Permit To Construct		Permit To Operate		Description of the modification
No.	**Issue date**	**No.**	**Issue date**	
			1949	Construct The FCCU recovery
29229		42284	10/26/1957	Adding a new Deethanizer and associated equipment.
A-15122	2/27/1963			The addition of three suction scrubbers.
A-68859		P51291	10/30/72	Adding heat exchanger and pumps.
113715	08/30/1983	M41677	12/10/84	The addition of a 12 module catalyst separator system to remove catalyst fines from FC heavy cycle gas oil.
136718		M48070	8/30/85	Change of Ownership from Texaco inc to Texaco refinining

				&marketing
146095	06/03/1986			1.Removing 5 existing IC engine compressors unit with associated equipment 2. Installing a new 7000 HP motor wet gas compressor with associated equipment
162870	5/8/1989			Add new condensate drum, V-1788, propane/propylene drum, V-1789, and associated equipment.
254772		D43996	10/31/1991	Modify by replacing two old pumps with new pumps to comply with Rule 1173 requirements.
346643		F17434	11/13/2002	Change of Ownership from Texaco refinining & marketing to Equilon Enterprises LLC
376618				The Debutanizer Column V-1457 (D1280) was revamped to reduce the butane content and RVP of the tower bottoms These changes were made to replace octane loss from elimination of MTBE in the gasoline, to comply with CARB RFG phase III
457927			11/28/2007	Replace the existing High pressure Separator V-422 (D83) with a new drum V-2343(D1597). Install a new wash water flash drum V2344 (D1598). V- 420 (D1270) was physically removed.
470268			11/28/2007	Change of Ownership from Equilon to Tesoro Refining &Marketing Co
472873			11/29/2007	Modification of the existing sour water flash drum V-2344 (D1598) in the FCCU to accept flare gas recovery sour water as part of the flare recovery project to comply with Rule 1118 requirements.

Background of the proposed modifications

Tesoro is proposing to replace the existing Depropanizer Tower (V-410) in the FCCU Recovery Section (System 1, Process 3, D908) with a functionally equivalent new Depropanizer Tower (V-410A). The existing Tower (V-410) will be removed and the new tower will be built on the same foundation.

The table below lists all the permitted devices in the permit unit (new device is *underlined*, modified device is **bolded**, and deleted device is ~~*strikethrough.*~~ The third column shows the most recent application number associated with previous permit action. The last column shows the application number associated with this proposed modification.

Permit Unit	List of Permitted Devices in the Permit Unit (System)	Application No. Associated with Current Permit	Status of Permit Prior to this Proposed Modification	Application No. For This Proposed Modification
FCCU Recovery Process 3, System 1	D78, D1267, D1268, D1269, ~~D908,~~ D79, D915, D80, D81, D82, D84, D85, D1271, D86, D1273, D1275, D1272, D912, D1280, D910, D913, D909, D87, D918, D1597, D1598, D1365, DXXX,	472873	Permit to Construct Issued	535089

FEE ANALYSIS

Table 2 – Summary of Permit Processing Fees

	Equipment Description	**BCAT/ CCAT**	**Fee Schedule**	**Fee Type**	**Fee**	**XPP Fee**	**Total Fee**
535089	FCCU/Recovery Section	000521	H	Modification	$21,725.19	$10,862.6	$32,587.79
535090	Permit Amendment	555009		Title V Significant Amendment	$1,747.19		$1,747.19
						Total Permit Processing	**$34,334.98**

PROCESS DESCRIPTION

The FCCU consists of a catalyst circulation system and a fractionation/recovery system. The Catalyst Circulation System takes preheated vaporized gas oil and, in the presence of a fluidized catalyst, converts it into lighter hydrocarbons using the catalytic cracking process. This process occurs under high temperature and low pressure to convert the gas

oil feed to gasoline blending stocks and olefins. In addition, the catalyst in the system is continuously regenerated, removing carbon build up, so that it may be reused in cracking process.

The Fractionation/ Distillation Recovery System separates Heavy Cycle Gas Oil, Light Cycle Gas Oil, and Full Range Naphtha and further separates the full range naphtha into several types of naphtha, which are used for gasoline blending. The vapors travel up through and out to the Fractionation System to be separated into liquid and gaseous products.

EQUIPMENT DESCRIPTION

The proposed modification will not change the maximum daily input and output of the Depropanizer tower. This project entails demolishing the existing FCCU Depropanizer Tower (V-410) (Process 3, System 1, D908), and replacing it with a new Depropanizer Tower. The height will increase from the existing 80' to 99'-6" tangent to tangent. The proposed new vessel total height will be 108' from base of skirt to the top of the vessel. The majority of the existing pipe, instrumentation and platforms on the existing tower will be refurbished and reused. New conduit and 20 foot pipe extensions will be added to accommodate the additional tower height. All associated pumps, control valves, reboiler and cooling condensers, the overhead accumulator vessel and other associated equipment will be cleaned, serviced and reused.

The current vessel was constructed in 1940's and has been in service for 63 years. Tesoro's Pressure Equipment Integrity (PEI) Team has determined this vessel has served a useful life and would require extensive repair/service to maintain the required API 510 equipment standards if it were not replaced. The Tesoro PEI group recommends replacing the existing tower with a new carbon steel tower.

The increase in height will allow for better separation efficiency of butylenes (C4's) and propylene's (C3's) of the Depropanizer feed which is a mixed Olefin/LPG product stream from the FCCU Debutanizer.
The proposed modification will result in : 1) improved efficiency, 2) substantial energy savings and 3) the ability to produce saleable refinery grade propylene (less than 2% C4's in the C3 overhead stream). Currently, the existing tower's performance results in a sloppy split on the overhead stream with C4's in the C3 overhead stream and likewise with C3's in the C4 bottom stream. Approximately 5-12% of C4's are entrained in the C3 overhead stream. The incomplete separation requires a continued need for recycling within the FCCU system resulting in lowered efficiency and unnecessary consumption of energy. A more complete separation can be accomplished with the new taller Depropanizer replacement. There will be no increase in the charge rate to the Depropanizer Tower and no increase to the total products leaving the Tower.

Under emergency, releases from the existing Depropanizer Tower (V-410) to the flare gas recovery system occurres through the pressure relief device (R-2294/R-2295). The new Depropanizer Tower (V-410A) will continue to utilize the existing pressure relief device (R-2294/R-2295) currently used at the existing Depropanizer Tower (V-410) for emergency relief to the flare gas recovery system.

As the butylene/propylene feed mixture is pumped from the Debutanizer Reflux Accumulatorv-1549(D913) by the Debutanizer Overhead Liquid/Reflux Pump it gets preheated passing through the tube side of the Depropanizer Feed Preheater (E-1742). The feed stream enters the Depropanizer above tray 15 in the column and the separation process begins.

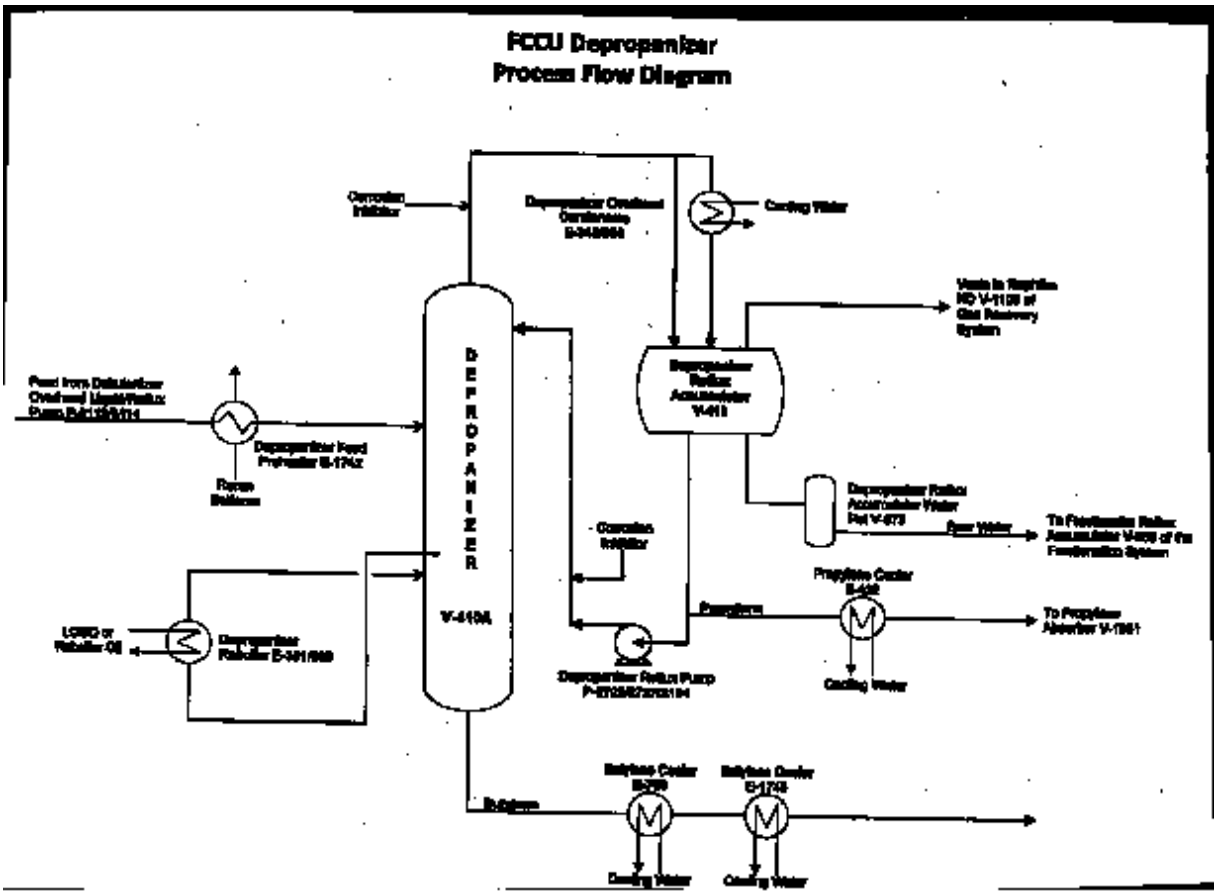
The Depropanizer Reboiler (E-351 or E-385) heats the liquid accumulating near the bottom of the column as it gets drawn from the tower, passing through the shell side of the exchanger, and returns to the column. Reboiler oil or LCGO Pumparound from the Fractionation System provides the heat exchange as it flows through the tube side of the exchanger. The reboiler maintains the necessary temperature in the lower part of the column. The propylene vaporizes at this temperature. As the vapor rises through the tower, it is cooled from the top of the column with reflux derived from the Depropanizer Reflux Accumulator (V-416) by way of the Depropanizer Reflux Pump (P-2726, P-2727 or P-2104). This cooling effect liquefies the butylene in the vapor, and as the liquid cascades down the column from one tray to another it continues this cooling process as it makes contact with the rising vapor. The propylene leaves the column overhead as vapor, while the butylene is separated, accumulating at the bottom of the column.

The butylene is pressured from the bottom of the column and through the shell sides of the two Butylene Coolers (E-709 and E-1743). The butylene is cooled with water passing through the tube sides of the coolers. After being cooled, the butylene goes to the Alkylation Unit for further processing.

As the propylene vapor exits the top of the column, it receives an injection of corrosion inhibitor and then passes through the shell sides of the Depropanizer Overhead Condensers (E-349 and E-350). The vapor is condensed to liquid as a result of the cooling water passing through the tube side of the exchanger. The condensed propylene accumulates in the Depropanizer Reflux Accumulator and as noted earlier, is partially used for the reflux after receiving an injection of corrosion inhibitor. The propylene is also pressured from the accumulator through the shell side of the Propylene Cooler (E-432), where it gets cooled with water flowing through the tube side of the exchanger. Once it is cooled, the propylene goes to the Propylene Absorber (V-1681) of the Propylene Treatment System.

The Depropanizer maintains a pressure of approximately 250 PSIG. This is accomplished with a pressure controller that controls the amount of overhead vapor being condensed into the liquid.

See below Process Flow Diagram "FCCU Depropanizer"



EMISSIONS CALCULATIONS

VOC emissions from the fugitive emissions count from the above modification are summarized below in Table3. These emissions are calculated from fugitive components that consist of valves, flanges.. Tesoro submitted a detailed pre and post project fugitive emissions in the P&IDs drawings, a list of all non-bellow seal valves with clarifications why bellow seals were not used. This information can be found in Attachment II. The FCCU Recovery section has a decrease of 0.38 lb/day of VOC fugitive emissions of the number of components that were added and/or removed from the pre-modification to post-modification.

For NSR, as a baseline, the VOC emissions will be changed from 131.52 lbs/day to 131.14 lbs/day, resulting in overall emissions decrease of 0.38 lbs/day.

Table 3- Fugitive Emissions Calculations for Depropanizer Replacement

New Source Unit with BACT		Service	Number of Sources	BACT Emission Factor (lb/yr)	Total Annual Emissions lbs/yr
Valves	**Sealed Bellows**	**Gas/Vapor and Light Liquid**	22	0.00	0.0
	SCAQMD Approved I & M Program	**Gas/Vapor**	0	4.55	0.0
		Light Liquid	15	4.55	68.25
			-41	4.55	-186.55
		Heavy Liquid	0	4.55	0.0
Pumps	**Sealless Type**	**Light Liquid**	0	0.00	0.0
	Double Mechanical Seals or Equivalent Seals	**Light Liquid**	0	46.83	0.0
	Single Mechanical Seal	**Heavy Liquid**	**0**	46.83	0.0
	Double Mechanical Seals	**Heavy Liquid**	0	46.83	0.0
Compressors		**Gas/Vapor**	0	9.09	0.0
Flanges (ANSI B 16.5-1988)		**All**	29	6.99	202.71
Removal of Existing Flanges			-32	6.99	-323.68
Pressure Relief Valves		**All**	0 (Use Existing PRV)	0.00	0.0
Process Drains with P-Trap or Seal Pot		**All**	0	9.09	0.0
			Totals	lbs/year	-139.26
				lbs/day	-0.38

Note:
(1) All new source units are subject to SCAQMD BACT with monthly inspection and maintenance (I&M) and 500 ppm by OVA.
(2) The non-zero BACT emission factors are based on an 80 percent reduction from the SCAQMD form R-3 factors.
(3) Light liquid and gas/liquid streams: Liquid or gas/liquid stream with a vapor pressure greater than that of kerosene (>0.1 psia @ 100□F or 689 Pa @ 38□C), based on the most volatile class present at >20% by volume
(4) Heavy liquid: streams with a vapor pressure equal to or less than that of kerosene (0.1 psia @ 100F or 689 Pa @ 38C) based on the most volatile class present >20% by volume.

RULE EVALUATION:

PART 1 SCAQMD REGULATIONS

Regulation II- PERMITS

Rule 212	**Standards for Approving Permits**	**November 14, 1997**
	212 (a)	The applicant is required to show that the equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminants in violation of provisions of Division 26 of the State Health and Safety Code of these rules. The operation of the FCCU Recovery system is expected to comply with this requirement.
	212(c)(1)	Public notification is required if any new or modified permit unit, source under Regulation XX, or equipment under Regulation XXX may emit air contaminants located within 1000 feet from the outer boundary of a school. The source is not within 1000 feet of a school, public notification is therefore not required.
	212(c)(2)	Public notification is required if any new or modified facility has on-site increases exceeding any of the daily maximums specified in subdivision (g) of this rule. The modification of the FCCU Recovery system does not have an increase of HC emissions, and does not

exceed any of the daily maximums specified, public notification is therefore not required.

212(c)(3) Public notification is required if the maximum individual cancer risk (MICR), based on Rule 1401, exceeds one in a million (1×10^{-6}), due to a project's new construction or proposed modification. The modification of the FCCU Recovery system does not result in MICR exceeding one in a million, public notification is therefore not required.

212(g) This subdivision sets forth the process for federal public notification and distribution and specifies the daily maximum emissions increase as follows:

Air Contaminant	**Daily Maximum in lbs/day**
Volatile Organic Compounds	30
Nitrogen Oxides	40
PM10	30
Sulfur Dioxide	60
Carbon Monoxide	220
Lead	3

There is no increase of emissions.

Regulation IV PROHIBITIONS

Rule 401	***Visible Emissions*** ***November 9, 2001***
	Visible emissions are not expected under normal operating conditions of the unit.
Rule 402	***Nuisance*** ***May 7, 1976***
	Nuisance complaints associated with the above project are not expected under normal operating conditions.

Regulation XI Source Specific Standards

Rule 1123	***Refinery Process Turnaround*** ***December 7, 1990***
(b) Requirements	(1) During process turnarounds, the operator shall not depressurize any vessel containing organic materials unless the vapors released from the vessel are collected and contained for use as fuel or sent to a gas disposal system until the pressure in the vessel is below 5 psig, or is within 10 % above the minimum gauge pressure at which the vapors can be collected, whichever is lower.
	(2) If the refinery uses inert gas displacement or vacuum eduction for process turnaround, the refinery operator shall submit a Rule 1123 plan per Rule 1123(b)(2). Tesoro submitted R1123 plan under A/N 474117 and it was approved and was issued on 7/21/10.
(c) Recordkeeping	The operator is required to maintain a record of each refinery process unit turnaround containing at a minimum the date the unit was shut down, the approximate vessel hydrocarbon concentration when hydrocarbons were first discharged into the atmosphere, and the approximate amount of hydrocarbons emitted into the atmosphere.
	Each process unit with a vessel containing organic materials will contain a system condition (S13.4) that specifies that the devices in the systems are subject to Rule 1123.
Rule 1173	***Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants*** ***December 6, 2002***
	The proposed modification will flanges that are subject to control of fugitive emissions. Tesoro has an approved Inspection and Maintenance (I&M) Program (A/N 477506). Tesoro will include the new components into their I&M program.

REG XIII	***New Source Review*** *(Amended December 6, 2002)*
	The modifications proposed in this project will result in decrease of ROG emissions because there is demolition of equipment and fugitive components(valves and pump) and mny valves are Bellow seals valves and all pumps in light liquid service will be equipped with double or tandem seals vented to a closed system. The emission decrease due to this project is shown in Table 3. Therefore, Regulation XIII –NSR and Rule 2005 – RECLAIM NSR do not apply. The following is a discussion of each requirement in NSR
BACT: 1303(a)	Since this application does not result in a net emission increase of any non-attainment air contaminant, BACT does no not apply. BACT means the most stringent emission limitation or control technique. However, the new valves were equipped with bellows seals.
1303(b)(1)	Modeling: Do not apply. The emission decrease due to this project is shown in Table 3. Therefore, no air quality modeling is required for the new installations.
1303(b)(2)	Offset: Do not apply. The emission decrease due to this project is shown in Table 3. Therefore, no offset is required for the new installation.
1303(b)(3)	Sensitive Zone Requirements. Do not apply
1303(b)(4)	Facility Compliance. Do not apply
1303(b)(5)	Major Polluting Facilities. Do not apply

Rule 1401	***New Source Review of Toxic Air Contaminants*** ***May 3, 2002***
	There is no increase in any toxic or carcinogenic air pollutants as a result of this project. The operational emission from the proposed project will have no increase of emissions. Therefore, the Rule 1401 is not applicable [Rule 1401(g)]

Regulation XXX	***Title V Permits*** ***March 16, 2001***
	Rule 3001(a): Applicability (Amended November 14, 1997) Tesoro Refinery is currently subject to Title V. The permit issued for the modification of the FCCU Recovery unit will be issued as a revision of the Title V permit. Permit revisions are categorized into the following four types: administrative, minor, de minimis significant and significant. As defined in Rule 3000, a minor Title V permit revision is any revision that : 1. Does not require or change a case-by-case evaluation of a RACT or MACT emission limitation; 2. Does not require any significant change in monitoring terms or conditions in the permit; 3. Does not require relaxation of any recordkeeping, or reporting requirement, term, or condition in the Title V permit; 4. Does not result in an increase in emissions of a pollutant subject to New Source review or hazardous air pollutants (HAP); 5. Does not result in an installation of new permit unit subject to a New Source Performance Standard (NSPS) pursuant to 40 CFR Part 60, or a National Emission Standard for Hazardous Air Pollutants (NESHAP) pursuant to 40 CFR Part 61 or 40 CFR Part 63; 6. Does not result in a modification or reconstruction of existing

equipment, resulting in an emission increase subject to new or additional NSPS requirements pursuant to 40 CFR Part 60, or to new or additional NESHAP requirements pursuant to 40 CFR Part 61 or 40 CFR Part 63;

7. Does not establish or change a permit condition that the facility has accepted to avoid an applicable requirement;
8. Does not result in an emission increase of RECLAIM pollutants over the facility's starting allocation plus NTCs or higher Allocation amount which has previously undergone a significant permit revision process;
9. Does not violate a regulatory requirement

The Tesoro Los Angeles Refinery has been designated as a Title V facility. The initial Title V permit was issued on November 23, 2009. The modification of the FCCU Recovery system will not increase the VOC emissions, therefore, this Title V permit revision A/N 535089 qualifies as ***a minor revision***, which will be sent to EPA for a 45-day review. Public notice is not required. A final copy of the permit will be submitted to the EPA within 5 working days of its issuance.

PART 2 STATE REGULATIONS

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., requires that the environmental impacts of proposed "projects" be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects be identified and implemented. According to the District's CEQA guidelines, the thresholds for significant effect are:

NOx 55 pounds per day

ROG 55 pounds per day

PM10 150 pounds per day

CO 550 pounds per day

	SOx 150 lbs per day The CEQA Applicability Form (400-CEQA) submitted by Tesoro indicates the expected impacts of the project on the environment are not significant since the net emission ROG increase does not trigger the thresholds ROG: 55 LBS/DAY of The District's CEQA Guidelines. Therefore a CEQA analysis is not required.

PART 3 FEDERAL REGULATIONS

40CFR Part 63 Subpart CC	**National Emission Standard for Hazardous Air Pollutants from Petroleum Refineries**
§63.648	This process unit is subject to the equipment leak standards, detection, and repair requirements of 40.CFR63 Subpart CC, Section 63.648. The equipment leak inspection and monitoring requirements of Rule 1173 are in general more stringent than that specified in Section 63.648. Therefore, compliance with the inspection, maintenance, and recordkeeping requirements of this rule are expected.

40 CFR Part 60 Subpart GGGa	**Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification commenced after November 7, 2006**
	This modification does not result in increase in emissions. Therefore subpart GGGa is not applicable

40CFR60 Subpart QQQ	**Standards of Performance for VOC Sources from Petroleum Refinery Wastewater Systems** This regulation is applicable to a facility located in petroleum refineries for which construction, modification, or reconstruction commenced after May 4, 1987. The following are separate affected facilities under this regulation: An individual drain system (all process drains connected to the first common downstream junction box, together with their associated sewer lines and junction boxes, downstream to the receiving oil-water separator) An oil-water separator

	An aggregate facility (individual drain system together with ancillary downstream sewer lines and oil-water separators) According Tesoro, this project will not include the installation or modification of any process drains or wastewater system components. Compliance with this rule should not be impacted by the modification proposed for this project.

RECOMMENDATIONS

A permit to construct is recommended subject to the following conditions:

Additions are shown as underlined and deletions are shown as ~~strikeouts~~.

PROCESS CONDITION

P13.1 All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
Benzene	40CFR61, Subpart	FF

[40CFR61 Subpart FF, 12-4-2003]

[Processes subject to this condition: 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15]

SYSTEM CONDITIONS

S13. 4 All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1123

[RULE 1123, 12-7-1990]

[Systems subject to this condition : Process 1, System 1 , 2; Process 2, System 1 , 3 , 4 , 6 , 7 , 10; Process 3, System 1 , 2 , 4 , 5; Process 4, System 1 , 3 , 5 , 7 , 9; Process 5, System 1 , 3 , 5; Process 6, System 1 , 3; Process 8, System 1; Process 9, System 1 , 2 , 3 , 4; Process 12, System 5 , 8; Process 19, System 3; Process 21, System 1 , 3]

S15.2 The vent gases from all affected devices of this process/system shall be vented as follows:

This process/system shall not be operated unless the blowdown flare system is in full use and has a valid permit to receive vent gases from this system.

All emergency vent gases shall be directed to the refinery flares (process 21, system1) or flare gas recovery system (process 21, system 4) which may also includes DCU Blowdown Compressor C-137 (device D68) except Devices IDs D898, D20, D910, D1268, D1269, D1280, D93, D94, D96, D1283, D1284, D1288, D1292, D219, D226, D1212, D275, D1256, D375, D928, D1267 & D916 that vent to the atmosphere.

This process/system shall not be operated unless the blowdown flare system is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition : Process 1, System 1 , 2; Process 2, System 1 , 3 , 4 , 6 , 10; Process 3, System 1 , 2 , 5; Process 4, System 1 , 3 , 5 , 7 , 9; Process 5, System 1 , 3 , 5; Process 6, System 1 , 3; Process 8, System 1; Process 9, System 1 , 2 , 3; Process 12, System 8; Process 19, System 3; Process 21,System 4]

S15.12 The vent gases from all affected devices of this process/system shall be vented as follows:

All sour gases under normal operating conditions shall be directed to the FCCU gas
treating system.

This process/system shall not be operated unless the FCCU gas treating system is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]
[Systems subject to this condition: Process 3, System 1, 2]

S31.1 The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 347559, 347560, 347564, 366048, 366083, 376616, 376622, 376623, 376624, 376625, 376626, 376627, 376628 & 381228, 435139, 457927, 501287 & 501288:

All open-ended valves shall be equipped with cap, blind angle, plug, or a second valve.

All pressure relief valves shall be connected to closed vent system or equipped with rupture disc.

All sampling connections shall be closed-purge, closed-loop, or closed-vent system.

All new components in VOC service as defined in Rule 1173, except valves and flanges, shall be inspected quarterly using EPA reference Method 21. All new valves and flanges in VOC service except those specifically exempted by Rule 1173 shall be inspected monthly using EPA Method 21.

All new components in VOC service, a leak greater than 500 ppm but less than 1,000 ppm measured as methane above background as measured using EPA Method 21, shall be repaired within 14 days of detection.

All new valves in VOC service shall be of leakless type, except those specifically exempted by Rule 1173 or approved by the District in the following applications: heavy liquid service, control valves, instrument piping/tubing, applications requiring torsional valve stem motion, applications where failures could pose safety hazards (e.g. drain valves with valve stems in horizontal position), retrofits with space limitations, and valves not commercially available.

If 98.0 percent or greater of the new valve and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppm for two consecutive months, then the operator may revert to a quarterly inspection program with the approval of the executive officer. This condition does not apply to leakless valves.

The operator shall keep records of the monthly inspection (and quarterly where applicable), subsequent repair, and reinspection, in a manner approved by the District.

The operator shall provide to the District, no later than 90 days after initial startup, a recalculation of the fugitive emissions based on actual components installed and removed from service. The operator shall also submit a complete, as built, piping and instrumentation diagram(s) and copies of requisition data sheets for all non-leakless type valves with a listing of tag numbers and reasons why leakless valves were not used.

For the purpose of this condition, leakless valve shall be defined as any valve equipped with sealed bellow or equivalent as approved in writing by the District prior to installation.

Components shall be defined as any valve, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, and meter, which are not exempt by Rule 1173.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[Systems subject to this condition : Process 2, System 1; Process 3, System 1; Process 4, System 1 , 3 , 7; Process 5, System 1 , 3 , 5; Process 6, System 1; Process 8, System1; Process 9, System 1; Process 15, System 3; Process 23, System 1]

DEVICE CONDITIONS

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/ Subpart
VOC	40CFR60, SUBPART	GGG

[40CFR 60 Subpart GGG, 6-2-2008]

[Devices subject to this condition: D68, D377, D901, D918]

H23.16: This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/ Subpart
VOC	District Rule	1173
VOC	40CFR60	GGG

[RULE 1173, 5-13-1994; RULE 1173, 12-6-2009; 40CFR 60 Subpart GGG, 6-2-2008]
[Devices subject to this condition: D1365, D1380]

Attachments

1.	NOV's and NC's Issued
2.	List of non- Bellows Seals Valves